New American Schools

How to Make the Link Between Standards, Assessments, and Real Student Achievement

Robert Rothman

Establishing a solid standards-and-assessment system is only the first step toward the ultimate goal of bringing all students to the standards. But without this first step, all others will fall short, argues Robert Rothman. In this paper, he explains the essential role of standards and assessments in improving student achievement and offers solutions to challenges districts face in putting standards—and assessments aligned to them—in place.

Getting Better by Design

New American Schools

New American Schools (NAS) is a dynamic coalition of teachers, administrators, parents, community and business leaders, policy makers, and experts from around the country committed to improving achievement for all students by dramatically changing America's classrooms, schools, and school systems.

Unlike many reforms that are add-on programs or isolated projects, NAS designs aim to improve the whole school, from curricula and instruction to funding and community involvement.

Recognizing that one size doesn't fit all schools and communities, NAS offers a choice of different designs—blueprints—for helping all students achieve at high levels. (For information on each design, turn to the inside back cover.)

New American Schools has clear and consistent goals:

- Establish supportive and assistance-oriented school systems.
- Develop school and teacher capacity to teach all students to high academic standards.
- Spend resources wisely with an eye to student results.
- Build broad and deep community support for education improvement and excellence.
- Make America's public schools places where all students excel.

New American Schools is results-oriented.

In a short period of time, NAS has generated impressive results. In many schools using a NAS design:

- students are producing higher-quality work, achieving at higher levels, and showing improvement on standardized tests and other measures of performance;
- discipline problems are down and student attendance and engagement are up;
- both teacher enthusiasm and community involvement are on the rise; and
- student achievement is improving quicker than conventional wisdom suggests is possible.

New American Schools helps partner districts restructure.

To overcome traditional barriers to school excellence, NAS provides focused assistance to its district partners in five key areas:

- rethinking school finance, including investment funding and resource reallocation strategies;
- revamping professional development infrastructures to support whole-school transformation;
- setting high academic standards and linked assessments;
- giving schools authority to make decisions about curriculum, staff, and spending as well as holding them accountable for results; and
- engaging parents and the public in improvement efforts.

New American Schools believes in shared accountability.

The foundation of NAS is a strong partnership built on shared responsibility for results. Clearly defined roles link partners to one another and to results. All stakeholders in a NAS community—teachers, administrators, district leaders, parents, NAS Design Teams—are expected to take responsibility and to be held accountable for helping to improve student achievement.

NAS partners also commit to regular and rigorous assessment of their performance, resulting in the sound business practice of continuous improvement. The RAND Corporation is the independent evaluator of the New American Schools' effort.

Getting Better by Design

How to Make the Link Between Standards, Assessments, and Real Student Achievement

Robert Rothman

It is no accident that standards and assessment are central to all eight designs sponsored by New American Schools (NAS). These designs, as well as school reforms generally, are aimed at significantly enhancing student learning—and standards and assessment are at the heart of that endeavor. Of course, establishing a solid standards-and-assessment system is only the first step toward the ultimate goal of bringing all students to the standards. But without this first step, all others will fall short, and student learning will not reach the ambitious heights that the NAS Design Teams envision. (For a description of each New American Schools design, turn to the inside back cover.)

How Standards and Assessments Improve Student Learning

Simply put, standards and assessments define learning and how we as educators, parents, and members of the public know whether students have mastered what they need to learn. Standards identify what we expect students to know and be able to do—the content we expect them to acquire, the skills we expect them to attain, the intellectual qualities and habits of mind we expect them to develop. Moreover, standards help ensure equity by setting high expectations for all students.

Assessments linked to specific standards, meanwhile, define the ways students can

Robert Rothman

Mr. Rothman is a nationally known writer on educational policy and practice. A former editor and writer for *Education Week*, Rothman is currently the director of special projects for the National Center on Education and the Economy, which manages the National Alliance for Restructuring Education and New Standards.

The author of *Measuring Standards, Assessment, and School Reform,* Rothman has written for numerous national publications and has contributed chapters to four books. His 1991 series, "Thinking About Thinking," written with Debra Viadero, won the National Psychology Award for Excellence in Newspaper Writing from the American Psychological Association.

demonstrate that they possess the knowledge and skills the standards demand. Assessments make the standards concrete. And the results show the extent to which students, schools, and school districts are making progress toward meeting the standards.

At their best, standards and assessments are more than just the necessary first step toward improved student learning. Properly done, they actually help parents, teachers, and community members enable students—as well as help students enable themselves—to achieve at much higher levels. Standards set clear, visible targets for performance and provide models of what good performance looks like. Likewise, stimulating and engaging assessments can improve learning—not just measure it—by providing students with opportunities to perform tasks that challenge them to use their knowledge, and by providing teachers with examples of the kinds of work and performance that students are capable of producing in their classrooms day after day.

"Standards and assessments define learning and how we as educators, parents, and members of the public know whether students have mastered what they need to learn."

Educators and policy makers increasingly recognize the critical role of standards and assessment in improving student learning, and more and more districts and states are working to build new standards-and-assessment systems. The 1996 Education Summit, where the nation's governors and chief executive officers of major corporations endorsed standards for student performance, is only the most prominent example of the growing support for the idea.

Avoiding the Dilemma of Conflicting Goals

While progress has been made in recognizing the importance of clear standards and assessments to measure whether students meet them, few jurisdictions have standards-and-assessment systems in place. Many are at the starting point. They lack standards, or, if they have developed standards, they lack an assessment system linked to the standards. Rarely do districts possess a means of using standards in the classroom to change teaching and learning and enable all students to reach high levels of achievement.

As a result, schools that are restructuring, and NAS Design Teams assisting them, face a significant dilemma: They can focus on their learning goals and risk the possibility that students may fare relatively poorly on accountability measures not aligned with their goals; or they can concentrate on the tests used for accountability and risk compromising, or at least postponing, progress toward their learning goals. Either way, students are shortchanged.

This paper is aimed at helping districts help schools avoid that Hobson's choice by providing a guide toward the development of an effective standards-and-assessment system. It outlines the critical role of standards and assessment in improving student learning and shows ways in which using standards in the classroom, and as part of a professional development program, can improve instruction and enhance student learning. It describes resources the New American Schools Design Teams offer to help schools implement a standards-based system. And it provides guidance on key challenges districts face as they put such systems in place.

What Do We Mean by "Standards"?

Before we continue, it is important to be clear on terms. "Standards" has been bandied about so much in the education reform debate that many people remain confused about what the word actually means.

Most of the standards developed over the past few years have been *content standards.* A good example is national subject-area standards, such as those developed by the

National Council of Teachers of Mathematics (NCTM). Content standards outline the concepts and skills students should know and be able to do, and the levels of schooling—elementary, middle, or high school—at which they should demonstrate understanding of particular concepts and skills.

Content standards are valuable in helping schools and districts make judgments about curriculum. For example, the NCTM standards have been extremely influential in encouraging schools to place greater emphasis on mathematical problem solving and communication. The math standards have also led schools to introduce concepts such as statistics and probability in earlier grades.

As important as content standards are, though, they are less useful in providing guidance to assessment developers and teachers in determining the appropriate quality of student work. For those types of judgments, *performance standards* are valuable. They indicate the level of performance students should demonstrate and answer the question, "How good is good enough?"

How Content and Performance Standards Work Together

Consider the performance standards developed by New Standards, a partner of the National Alliance for Restructuring Education, a NAS design. They indicate not only the knowledge and skills students should acquire but also cite examples of student activities that would demonstrate such abilities. Most important, the New Standards documents include samples of student work that illustrate standard-setting performances, accompanied by commentary that describes the circumstances of each performance—such as whether it was done in class or at home, or as part of a timed assessment—and annotations to show how the work meets the standards.

For example, one of the New Standards elementary mathematics standards requires that a student "produce evidence that demonstrates understanding of geometry and measurement concepts," including visualizing and representing two-dimensional views of simple rectangular three-dimensional shapes. To illustrate a performance that is "good enough"—one that demonstrates achievement of the standard—the document includes student work produced in response to the following problem: "Andre built a shape with blocks. What would be the front view?" The sample shows that the student drew the front view of the given shape on a piece of graph paper and explained his reasoning. The work also met the standard for mathematical communication—or the use of mathematical terms—vocabulary and language.[1]

Other NAS designs such as Modern Red Schoolhouse have developed standards for student performance. Its standards include descriptions of the content students should know and be able to do and performance statements that indicate how students can demonstrate they have attained the standards. For example, a primary-level English language arts performance statement reads, "Each student can decode unknown words through a variety of strategies." The standards associated with that statement include the following:

- Each student can pronounce and decode unknown words using letter-sound relationships and knowledge of word structures.
- Each student can infer the meaning of unknown words in an unfamiliar reading passage by examining known words, syntax, or grammar in the context of the passage.
- Each student can use a dictionary.[2]

"Content standards help schools and districts make judgments about curriculum . . . performance standards answer the question, 'How good is good enough?' "

[1]New Standards. *Performance Standards, Volume 1: Elementary School.* Washington, D.C.: National Center on Education and the Economy, 1997.

[2]Modern Red Schoolhouse Institute. *Standards: Primary, Intermediate and Upper Levels.* Indianapolis: The Hudson

The Modern Red Schoolhouse assessments, meanwhile, provide examples of the types of tasks students should be able to perform to reach the standards. The work produced in completing the assessments serves as an exemplar of a standards-level performance.

Either way, through the development of explicit performance standards or the use of assessments to set performance standards, the two types of standards—content and performance—form the essential building blocks of a standards-based system.

Starting with Standards

While it is true that standards *alone* do not lead to high levels of student performance, they are a necessary condition—the place to start.

Standards make clear to students, teachers, parents, and the public the goals for learning. This is no small step, and it is absent in most education systems. Currently, learning goals are implicit or hidden altogether. Textbooks are brimming with content, yet the concepts and skills students are expected to develop through a unit are listed in the teacher's edition, not the student books. Tests are deliberately kept secret to preserve security, and consequently, students have no idea about what they are expected to know and be able to do.

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Despite such secrecy, some students consistently do well in school. They have a sense, honed from repeatedly producing high-quality work, of what a good performance looks like and what they have to do to produce it. Less successful students lack this understanding. They get papers back from the teacher that indicate they've fallen short of the mark, but they're not quite sure what the mark is or what they have to do to reach it.

How Standards Make Learning Goals Explicit

With a clear set of standards for content and performance, all students have a visible target toward which to aim. They know what they are expected to learn and be able to do, and they have a vivid image of what high-quality work looks like. In turn, they can assess their own work and determine whether it meets expectations and, if it does not, what they need to do to ensure it does. That provides an internal motivation for students to work hard, because they will want to produce high-quality work.

Making expectations clear to teachers, parents, and members of the community also helps students achieve. When all teachers are aware of what all students are expected to know and be able to do, their conversations can focus on student work in relation to the standards. Rather than talk about Johnny's problems, teachers can discuss what Johnny needs to do to bring himself up to the standards and what the staff collectively can do to help him. Similarly, parents and other significant adults can provide more specific help to children when they have a clear idea of what students should know and be able to do.

At the same time, standards integrated across grade levels and levels of schooling provide a coherence and sense of direction that is currently lacking in schools. Students know that what they are expected to learn in elementary school is the same as what they are expected to arrive knowing and being able to do in middle school. Teachers know that students coming into their classes have met particular standards, so they don't have to begin the year by going over what is old ground for many students. And parents know that the expectations for students in one school are the same as those in a school in another part of town.

Assessments as Learning Tools

Assessments can also contribute to improved student learning; however, not all assessments are equally effective at doing so. Whether assessments enhance student learning depends on two factors:

- the extent to which the assessments are aligned with the standards; and
- the extent to which the assessments are "authentic"—the kind of work students perform for the assessment represents real-life situations.

Assessments aligned with standards offer students and teachers greater opportunities to understand the expectations for student learning and the kind of work that meets those expectations. Assessments make standards real by giving students opportunities to produce work that meets the standards. At the same time, the criteria for scoring assessments spell out the expectations for students in greater detail. Students and teachers using those criteria know what constitutes a standards-level performance, one that exceeds the standards, and one that falls short—and why each is judged accordingly.

It is for this reason that teachers say again and again that scoring assessments is the best professional development opportunity they have ever experienced. By seeing many examples of student work and judging it against standards, and then by discussing their judgments with colleagues, teachers develop a clear understanding of high-quality student work. Most importantly, they also gain a sense of the kind of classroom environment they need to create to elicit such work from students.

Likewise, students also benefit from understanding assessment criteria. They develop a more vivid picture of the characteristics of high-quality work. And they can identify reasons why their work meets standards for quality, exceeds them, or is substandard.

The Power of Effective Assessments

To illustrate for students the power of understanding assessment criteria, consider what happened in one Kentucky middle school. As part of a unit on the causes of the American Revolution, the teacher of a combined English and history class asked students to draw political cartoons that illustrated the British and colonial points of view on a particular event. At first students were stymied. Then the teacher showed them samples of similar work from the state assessment, along with the scores the various pieces had received. When students compared the top-scoring examples with those that had received lower scores, they were able to understand the characteristics of a high-quality piece and better able to produce one themselves.

> ***"With a clear set of standards, students know what they are expected to learn and be able to do, and they have a vivid image of what high-quality work looks like."***

Authentic assessments also contribute to learning by giving students challenging and engaging tasks that ask them to use what they know. An assessment that requires students to draw on content knowledge to solve mathematics problems or demonstrate an understanding of historical trends is as much a learning tool as a classroom assignment that includes similar tasks. And a portfolio system melds the two—classroom instruction and assessment—by basing the assessment on work produced over the course of the school year.

Such assessments, moreover, help engage students in learning by clarifying how their work in school connects with the world outside of school. Schools that assess student performance through the use of meaningful projects and other long-range performance events have found that students care more deeply about

their work, try harder, and perform better than they do in other types of assessments. In addition, projects provide opportunities for students to work with adult mentors who can demonstrate how the knowledge and skills students are learning are used in the workplace and in everyday life.

Making the Case for a Districtwide System of Standards and Assessments

The educational benefits of standards and assessments are becoming well known, and these benefits are the reason they are key elements in the New American Schools designs. What has yet to happen, however, is to make standards and assessments part of the operating system within which schools that are reforming exist. Until that happens, these schools will bump up against a system that does not support—and may conflict with—their goals.

From a district's perspective, standards and assessments are the fulcrum of any reform strategy. As Allen Odden notes in his paper, "How to Create and Manage a Decentralized Education System," also part of this series, "a high-performance, decentralized district needs a well-developed 'instructional guidance' system. . . ."[3] Such a system, says Odden, directs the school to the prime focus of any whole-school design—the teaching and learning program. The core elements of an instructional guidance system would include high-quality curriculum-content standards, ambitious student-performance standards, and a test or assesment system that produces measures of performance relative to the standards.

"A standards-and-assessment system is essential to provide the accountability a decentralized system requires."

As Odden explains, a standards-and-assessment system is essential to provide the accountability a decentralized system requires. Without accountability for results, school districts could not relinquish authority over budgets and personnel to schools. Otherwise, they would be giving up their stewardship over public resources without any assurance that the resources are producing results. Yet without decentralized authority and resources, schools would be hard-pressed to implement New American Schools designs. They would lack the authority to make decisions about the type of teaching and organization necessary for their students to achieve at high levels and also lack the resources to acquire the assistance needed to create such an environment.

Moreover, implementing a standards-and-assessment system furthers the goal of significantly enhancing student achievement in other critical ways.

A standards-and-assessment system makes real a district's commitment to high expectations for all students.

Virtually every district claims to believe, at least rhetorically, that all young people can learn at high levels. A system of standards shows that the district means what it says. It states to the public, "This is what we expect every young person to be able to achieve." A system of assessments tied to the standards enables the district to determine the extent to which students and schools are living up to this belief, and makes it possible for the district to hold itself accountable for achieving its vision.

A standards-and-assessment system helps ensure that a school's (and NAS Design Team's) goals for student learning are shared by the district.

No longer will schools pursuing the ambitious aims represented by the New American Schools Design Teams act as renegades, fighting the district over policies such as standardized tests that measure performance against a different set of goals. Rather, the schools will become the

3 Odden, A. "How to Create and Manage a Decentralized Education System." NAS. 1997.

leading edge for the district, a source of expertise and advice, and a model for other schools.

District standards and assessments provide an objective way for schools to show progress.
If the schools are successful, their progress can provide evidence that several paths toward high achievement are possible—thus proving what New American Schools has long maintained. Without such evidence, if each school or Design Team had to show progress on its own, this conclusion would be more difficult to reach.

Most important, a districtwide system of standards and assessments makes it possible to focus resources on what counts—helping schools reach the standards.
Districts that adopt rigorous standards and measure results against them do not want to certify failure. They will do what is needed to help schools improve performance on the assessments and achieve the standards. That means making available resources that enable whole schools to organize their practices around the standards—not a smorgasbord of practices, but ones linked explicitly to the standards.

FIVE WAYS A STANDARDS-AND-ASSESSMENT SYSTEM SIGNIFICANTLY ENHANCES STUDENT ACHIEVEMENT

1. A standards-and-assessment system is essential to provide the accountability a decentralized system requires.

2. A standards-and-assessment system makes real a district's commitment to high expectations for all students.

3. A standards-and-assessment system helps ensure that a school's (and NAS Design Team's) goals for student learning are shared by the district.

4. District standards and assessments provide an objective way for schools to show progress.

5. Most important, a districtwide system of standards and assessments makes it possible to focus resources on what counts—helping schools reach the standards.

Marshaling Resources to Meet Standards

In a restructured system where schools have authority over programs and budgets, the schools—not the district—select and purchase appropriate assistance. But the district has an important role to play in supporting schools. First, it continues to provide technical assistance and professional development services, although not in the ways it previously did. The district no longer provides the sole source of such assistance; instead, it competes with other providers, such as NAS Design Teams, for school dollars. Such competition helps ensure that the services districts provide are of high quality; otherwise, schools can go elsewhere.

The second important role for a district is providing information on high-performing school designs, as well as on effective curricula and other programs. This information is vital for schools, but in a system of standards, it is especially important. Schools need to know what resources and materials they can use in their schools and classrooms that will enable their students to meet the standards.

"Using standards in the classroom means, fundamentally, that standards drive everything teachers and students do every day."

Using Standards in the Classroom

What must happen in classrooms to enable students to meet high standards? This is *the* key question. As previously stated, setting standards tied to authentic assessments is a crucial first step—and all others are ineffectual without this one. However, without the other steps, student learning will not reach the levels it can and ought to reach.

Using standards in the classroom means, fundamentally, that standards drive everything teachers and students do every day. The curriculum, instructional program, and grading system are all organized to give students opportunities to demonstrate that their work meets the standards. This represents a substantial shift from the way most schools currently operate. In many cases, the curriculum is driven by the need to cover a body of content, not to ensure that students demonstrate understanding of concepts and skills. The instructional programs and grading systems are often idiosyncratic, with some teachers demanding a great deal of students and others allowing them to get by with much less effort.

How Teachers and Students Benefit

Some teachers fear that a standards-driven system will take away their autonomy. But the opposite is true. Standards free teachers to concentrate on perfecting and presenting effective lessons and ensuring that students' work is of the highest quality, rather than constantly inventing an entire course of study from scratch. As Harold W. Stevenson and James W. Stigler[4] point out, the difference in role is like the difference between performing a symphony and writing it. The exceptional teacher can both write and perform well, but all teachers can work at honing their lessons.

Moreover, the standards foster a professional dialogue among teachers that is often missing in schools today. Teachers' conversations are limited because they do not share a common approach or even a common vocabulary. But with all teachers focused on the goal of bringing students to the standards, colleagues have a basis for meaningful discussions. They can talk about the most effective ways to teach students to write high-quality narrative essays, or to collect and organize statistical data to answer a question effectively.

Teachers who have taken part in scoring sessions for standards-based assessments have experienced these kinds of professional dialogues, and they report they've come away exhilarated. They say they emerge with

4 Stevenson, H.W. and J.W. Stigler. *The Learning Gap*. New York: Simon and Schuster. 1992.

a better understanding of changes they can make in their classrooms to improve student performance.

Students, too, gain authority over their own learning in a standards-based setting. Customarily, students turn in assignments or tests and await the judgment of teachers or test-makers to know whether their work passes muster. But if students know and understand the standards, they can evaluate their own work and perfect it until it reaches a high level of quality. Students can also judge one another's work against the criteria for high quality and thus help classmates learn and improve their work.

To illustrate the power of standards for students, one principal told the story of a primary-grade pupil named Ruby. Her classmates asked her one morning if she planned to turn in an assignment. "Oh, no," Ruby replied. "It's not up to standard." Ruby was determined to meet high standards of achievement.

Creating a Standards-Driven Classroom

Let's look at how the three basic elements of classrooms—curriculum, instruction, and grading—take on new meaning in a standards-driven environment.

Curriculum

According to the Third International Mathematics and Science Study, the United States curriculum, at least in math and science, represents a "splintered vision" of what should be taught. There is no clear direction to the curriculum, and what is there emphasizes breadth over depth. The curriculum is "a mile wide and an inch deep," the study found.

A standards-driven curriculum, by contrast, has a clear focus and is aimed at deep understanding, so that students are able to demonstrate achievement of the standards. It consists primarily of a range of assignments, or tasks students are asked to complete, of various "grain sizes"—from single steps to extended pieces of work. All these assignments, which also include instructional experiences, provide students with opportunities to demonstrate the knowledge and skills called for in the standards. The tasks build on students' prior knowledge and understanding, and over time they get progressively more complex, so that at the end of the course of study, students will have produced work that meets the standards.

For example, an English language arts curriculum might include tasks that ask students to write short narrative essays. Following these tasks, students might read narrative books or short stories, both to develop their understanding of these texts and to see models of exemplary narrative writing. In turn, students might write longer narrative essays, read more books, and then write even longer essays. The final essays should meet standards for narrative writing.

In many cases, the curriculum can be crafted so that students' work represents attainment of more than one standard. In the example above, for instance, the essays could demonstrate achievement of the standards for narrative writing, reading and comprehending informational material, and using the conventions of writing.

Instruction

In a standards-driven classroom, instruction differs from traditional practice in a major way—from the outset, both students and teacher have a clear sense of where a lesson is headed and what students are expected to know and be able to do as a result. This awareness has a powerful effect on student engagement. As teachers know well, students are wary of lessons they are told to learn because "you'll need it in high school" or "you'll need it in college." Or students ask whether certain material will be "on the test," and then tune out if the answer is "no." By contrast, when students understand

the context for a lesson, they are much more absorbed in it and, consequently, learn more.

Teachers in standards-driven classrooms provide a variety of opportunities for students to internalize the expectations for their work and for judging their work against those expectations. Often teachers collaborate with students in developing rubrics for particular projects that are based on the standards. In that way, students gain a clear understanding of what constitutes high-quality work and what their work is expected to demonstrate. The rubrics are then displayed prominently in the classroom, literally becoming part of the daily life of the class.

"Assessments make standards real by giving students opportunities to produce work that meets the standards."

In one elementary school in Memphis, for example, students completing a project on music worked together in groups to develop, with the teacher, rubrics for evaluating their project. Using district standards, the students wrote descriptions of what both a good and a mediocre project would look like. By doing so, they developed a clear sense of quality and thus were able to identify quality in their own and peers' work.

Students also measure their work against the rubrics in a variety of ways. In some portfolio systems, students write letters or essays outlining why they included in their portfolios the work they selected and why it meets the expected criteria. In many classrooms, teachers encourage students to share their work with peers for editing and comment. In these ways, both student-writers and student-editors develop a better sense of high-quality work and what they have to do to produce it—in the same way that teachers do when they analyze and critique student work.

LEARNING FROM KENTUCKY
How Standards Reap Results

Among New American Schools jurisdictions, perhaps the best evidence of the positive effect of a system of standards-driven instruction comes from Kentucky. As a result of the 1990 state supreme court decision declaring the entire state education system unconstitutional, and the 1991 Kentucky Education Reform Act that created a new, performance-based system in its place, Kentucky represents the most comprehensive statewide systemic effort to design education around student performance.

Under the Kentucky reform act, the state developed clear standards, called academic expectations, and designed a new performance-assessment system to measure progress against the standards. Under the system, student performance is measured on four levels: novice, apprentice, proficient, and distinguished. The state also set clear performance targets for each school, based on the school's initial performance on the assessment and on the premise that all students will reach the "proficient" level of performance within 20 years. If a

school exceeds its performance targets at each two-year increment, it is eligible for substantial cash rewards, averaging about $2,000 per teacher. If its performance falls short of the target, a school is assigned a "distinguished educator" by the state, who develops, along with the principal, a school improvement plan. If the school's performance declines, it could be subject to sanctions, such as reassignment of staff.

The Kentucky system thus provides real incentives for schools to redesign their curriculum and instructional program around the standards and assessments. Many schools in fact have done so, and the results after five years show significant improvement: Nearly all schools showed some gains, and student performance overall improved by about 19 percent.

To be sure, these results reflect a host of factors, not just standards and assessments. As part of the reform law, the state instituted a number of initiatives that provided schools with tools and strategies to help them improve student performance, including the distinguished educators, family resource centers to provide services for children and families in areas of high poverty, technology, a revamped and ungraded primary program, and assistance from New American Schools, specifically the National Alliance, which is now working in 56 schools in 17 districts in the state.

Nevertheless, teachers in Kentucky say the standards and assessments are a major factor driving curricular and instructional change in the state. And state studies back them up, by showing that schools that have improved the fastest have redesigned their classroom practices around the standards and assessments. The National Alliance schools, in fact, have outperformed statewide averages, since much of the Design Team's work in those schools is around instruction and organization based on standards.

"Teachers in Kentucky say the standards and assessments are a major factor driving curricular and instructional change. . . . And state studies back them up. . . ."

The challenge for Kentucky now is sustaining the improvement. The most recent assessment results show, at best, a leveling off. This suggests that schools have implemented the initial changes but have yet to complete a more fundamental transformation that will result in continued higher levels of student performance.

Grading

This is one of the most difficult practices to change, but one where change is perhaps needed most. As students are well aware, teachers are absolute monarchs over grading policy; as a result, grading practices vary widely. Students know which teachers are "easy"—those who give high marks while not requiring much work—and which are the "tough" ones who demand much more.

In a standards-driven system, this idiosyncratic practice would be unfair. Students need to know that if they produce work that meets standards for one teacher, that same work will meet the standards of another teacher. Otherwise, they are in for a rude awakening when they submit portfolios or take standards-based assessments that are scored centrally, or if they move to another class or another school.

"A standards-based grading system would end the 'negotiation' that is inevitable when teachers set their own standards for evaluating the work they assign. . . . With standards, the teacher's judgment is based on the quality of the work, not on the persuasiveness of a student or parent."

A standards-based grading system would also end the "negotiation" that is inevitable when teachers set their own standards for evaluating the work they assign. Now, a student who is dissatisfied with a grade can bargain with a teacher for a higher grade, and in many cases, win. But with standards, the teacher's judgment is based on the quality of the work, not on the persuasiveness of a student or parent. That change, too, makes the system more fair.

Because they are aimed at helping schools bring about high levels of learning for all students, the New American Schools Design Teams place a great emphasis on standards-driven teaching and learning. Their resources and professional development offer teachers and principals tools and assistance to redesign classrooms to use standards. (For specific examples from five NAS designs, see the box on pages 18-19.)

Four Challenges in Implementing Effective Standards-and-Assessment Systems

While Kentucky faces the task of building on and improving a system that has been in place for half a decade, most jurisdictions face the initial challenge of implementing an effective standards-and-assessment system. If this were easy to do, many more districts and states would have such systems in place by now. Educators and policy makers may be convinced that the idea is right, but they are less sure about how to make it work.

The hurdles in implementing standards, and assessments tied to them, are real—and they are not easily overcome. But jurisdictions that are on the road to putting such systems into place are finding ways to meet these challenges. Their successes can serve as both models and inspiration for school districts throughout the country.

Challenge One
Navigating the Maze of Existing Standards

The first significant challenge is in helping teachers and administrators navigate their way through the maze of standards that already exist. As the American Federation of Teachers (AFT) found, 48 states have developed or are in the process of developing standards in core subjects, and most are also developing assessments linked to the standards. In addition, many districts have their own standards, and many schools have standards as well. Add voluntary national standards, and you have a recipe for confusion.

To some extent, the problem of the multiplicity of standards may not be as serious as it appears. Many of the standards stem from common roots, such as the mathematics standards developed by NCTM, and thus share common

elements. Yet there are substantial differences among these standards, and teachers need to know the standards they are going to use.

Solution
Find Ways to Match and Highlight Major Standards

Achieve—the entity created in the wake of the education summit held by the nation's governors and leading CEOs—is moving to help schools and districts wend their way through the standards thicket. Achieve plans to create a searchable on-line database that will enable educators to locate standards by subject area and grade level—for example, standards for eighth-grade reading—and compare them.

Design Teams can also help in this regard. Through New Standards, the National Alliance provides a linking service that shows the extent to which locally developed standards match the New Standards Performance Standards. Modern Red Schoolhouse also correlates its standards with local and state learning objectives and tests, so that teachers can see commonalities among the statements of expectations for student learning.

In the end, though, districts need to play a role in brokering the various standards. Some develop their own matrices that show how various standards relate to one another. Some highlight the major standards in each subject area. Whatever the approach, these efforts clarify for schools, and for the Design Teams that assist them, expectations for student learning. In turn, they help schools and Design Teams set in motion the classroom changes needed to enable students to meet those expectations.

Challenge Two
Developing Deep Understanding of the Standards

A second major challenge is ensuring that the standards carry real meaning. People throughout the system—and particularly teachers and students—must have a deep understanding of the standards and the expectations they imply for students' knowledge and skills. As I have argued throughout this paper, students will meet standards only if they and their teachers are able to use the standards day after day in the classroom to develop their abilities and improve their work until it reaches standards-level quality. Without a deep understanding of the standards, this will not happen.

Unfortunately, districts or states can actually impede understanding through the type of standards they adopt. Some standards are simply too vague to be useful. Although their intentions—to gain as broad an acceptance as possible of the standards—are good, jurisdictions opt for language that all can agree to, removing anything that might provoke an objection. The result is standards that are abstract generalities and offer little guidance to teachers or students.

"Students will meet standards only if they . . . are able to use the standards day after day in the classroom to develop their abilities and improve their work until it reaches standards-level quality."

As the AFT found in its analysis of state standards, the lack of clarity in the standards is the rule rather than the exception. Of the 48 states that are developing standards, only 15 states have standards in all four core subjects—English, mathematics, science, and social studies—that are clear, specific, and well-grounded in content. The AFT report notes:

"The biggest problem with state standards is their inability to define the essential content students should learn in each subject. In some states, the standards are simply too broad or vague to be meaningful—example: 'Students should be able to read for a variety of purposes.'

"In other cases, content is touched upon in some way but not enough elaboration is provided for the standards to be useful—example:

'Students should be able to identify and classify various geometric figures.' Which figures? Classify them according to what properties?

"Another problem is standards that emphasize skills or processes without grounding in content—example: 'Students should be able to analyze and interpret historical events.' Can interpretation or analysis occur without first learning about a particular period in history? Which events are most important for students to learn about?" [5]

Solution
Use Student Work Samples to Make Standards Concrete

There is a way out of this predicament, and it offers a means of fostering a deep understanding of the standards. By providing, along with the standards, samples of exemplary student work, jurisdictions can make the standards concrete and bring into focus what it means to meet standards. Moreover, the examples also reassure teachers and students that standards-level work is possible and that students have accomplished it.

"There is no one right way to measure performance, as long as the assessments measure student performance against the standards."

Bringing together such examples and providing them to teachers and students takes time and effort, and districts and states must plan for that time in developing standards. They should also plan for professional development, to provide teachers with opportunities for meaningful discussions around the work and its implications for their classrooms.

Some jurisdictions accomplish this task by holding conferences around their assessments, using tasks from previous versions of the assessments and student responses to these tasks, as examples of standards-level work. Some hold discussions on cable television or through teacher newsletters. The Internet is also a promising venue for discussions around standards and student work; the Co-NECT Schools Design Team has successfully helped teachers through its World Wide Web–based exchange of projects and student work. By putting their standards on-line for discussion and debate, other jurisdictions can encourage a deeper understanding of the knowledge and skills students are expected to demonstrate and thus make a start toward achieving them.

In some cases, it is students who lead the effort to develop their own understanding of the standards. In ATLAS Communities schools, for example, students take charge of conferences—held three to four times a year among themselves, teachers, and parents—that focus on students' own work. In preparing for these sessions, students gain a deep understanding of the standards and are able to gauge their own work in relation to them.

Challenge Three
Building Confidence in New Assessments

A third challenge to implementing standards-and-assessment systems is ensuring confidence in the assessments. Educators generally agree that traditional tests provide an inadequate measure of student abilities and that performance-based assessments and portfolios enhance the quality of information available about students' knowledge and skills. Yet many educators and public officials, as well as members of the public, remain skeptical about the accuracy of the results of these new assessments. Unless jurisdictions can erase those doubts, their ability to implement new systems is in jeopardy.

In many respects, these public doubts about new assessments are healthy. Traditional tests have been in use for decades, and many have proved to be technically sound. Performance assessments, at least as external measures of student performance—those used by districts and states for accountability purposes—are relatively new. People are rightly concerned

5 American Federation of Teachers. *Making Standards Matter.* Washington, D.C.: American Federation of Teachers, 1996.

about whether a new instrument is "safe and effective," just as they would be with a new medical procedure. The concerns are particularly acute because the new measures appear more subjective and reliant on teachers' judgments than machine-scored standardized tests.

Although test quality is usually an arcane subject, parents and policy makers have shown an unusual interest in the technical quality of performance assessments, and in some cases their concerns have helped curtail a shift to new measures of student performance. In California, for example, an expert panel's report criticizing the California Learning Assessment System was a major reason behind the decision by Governor Pete Wilson to kill the program.

Solution
Improve the Reliability and Balance of Assessments

Although significant issues still remain, the good news for those shifting to new assessment systems is that jurisdictions trying out new methods are finding ways to improve the quality of the measures. Their success points to ways to build confidence in the assessments as they are implemented.

One sign of hope is that researchers are finding that new assessments can be scored much more reliably than before. Reliability has been a major concern with the new assessments, since a low level of reliability—agreement among evaluators on the score for a piece of student work—threatens confidence in a student's score. Researchers are finding that with a clear understanding of scoring criteria—supplemented by vivid examples of student work that meets the criteria—teachers can agree on the rating to assign a piece of student work. Getting such an agreement, though, demands considerable professional development in order to develop teachers' understanding of the standards.

Another sign of hope is that some jurisdictions, notably Kentucky, have modified their assessment systems to improve the technical quality without sacrificing their educational value. Kentucky's original assessment system was completely performance-based and included portfolios in mathematics and writing. But expert panels questioned the exclusive use of such methods to issue cash rewards for high performance and sanctions for declining performance. In response, the state added multiple-choice items to the assessment mix and used only the writing portfolios—which have a longer track record as assessments—as part of the accountability system. The result is a balanced system that includes a variety of measures of student performance. With these changes, Kentucky is shoring up the public's confidence that the state's way of measuring student performance is sound and that it can continue to help schools raise students' level of performance.

"In standards-based improvement efforts, which explicitly aim to strip away secrecy about expectations for student performance, public involvement is essential."

Kentucky's response is an appropriate one and demonstrates an important point—there is no one right way to measure performance, as long as the assessments measure student performance against the standards.

Challenge Four
Gaining Public Support for Standards-Based Education

The fourth major challenge jurisdictions face is related to the third: securing public support and endorsement for standards-based improvement in education. In addition to questioning the use of new assessments, parents and the public are raising doubts about standards and about using standards to hold students and schools accountable for performance.

In some cases, these questions stem from organized groups that have attacked standards as attempts to institute "outcome-based education," a much-abused term that now is

almost an epithet among some critics. To these groups, defining the knowledge and skills students should demonstrate represents an attempt to impose values on young people, an inappropriate role for schools.

At the same time, many parents question whether standards represent an attempt by educators to evade responsibility for their primary concern: teaching "the basics." Because of the emphasis many educators place on developing students' abilities to reason and solve problems, some parents fear that the three R's, which they consider paramount, might get lost in the shuffle.

Solution
Use Student Work to Ease Fears and Demonstrate Learning

Not many districts or states have responded effectively to such concerns. And some may have inadvertently fueled the fire by adopting vague standards that sound less than rigorous or test questions that appear to be invasions of privacy. Those that have responded effectively, though, have won enthusiastic support from the public. They have succeeded by using the most powerful tool the new systems offer: student work.

How do they use it? They point out ways that the kind of work they expect students to

FOUR CHALLENGES IN IMPLEMENTING EFFECTIVE STANDARDS-AND-ASSESSMENT SYSTEMS

- **Challenge One**
  Navigating the Maze of Existing Standards
- **Solution**
  Find Ways to Match and Highlight Major Standards
- **Challenge Two**
  Developing Deep Understanding of the Standards
- **Solution**
  Use Student Work Samples to Make Standards Concrete
- **Challenge Three**
  Building Confidence in New Assessments
- **Solution**
  Improve the Reliability and Balance of Assessments
- **Challenge Four**
  Gaining Public Support for Standards-Based Education
- **Solution**
  Use Student Work to Ease Fears and Demonstrate Learning

perform in the new standards-and-assessment systems is the kind of work parents want to see their children produce. They demonstrate how children learn "the basics" as they perform complex mathematics tasks and write multiple-page essays. And they show that students are learning academic knowledge and skills, not indoctrination in values and attitudes.

One of the best examples of a concerted effort to engage the public in a standards-based education system is in Edmonds, Washington, part of the Washington Alliance for Better Schools. Led by Sylvia Soholt, the district's community relations manager, the district has held numerous forums and produced a number of documents—including an annual calendar—to explain the direction in which the district is moving. All the efforts focus on student work. For example, a brochure includes test questions that indicate the range of abilities students will demonstrate. Teachers and students regularly hold "math nights" to show parents how that subject is taught. Perhaps most significantly, the district brought parents and local citizens into the standards-setting process, listened to their concerns, and developed standards as a community.

Have these efforts paid off in increased student learning? It is hard to draw a direct link between public engagement and student performance. Yet it is also hard to imagine a sustained effort to improve student learning without public support. Particularly in standards-based improvement efforts, which explicitly aim to strip away the secrecy about expectations for student performance that characterizes the current system, public involvement is essential. These schools could not continue down the path of bringing students up to standards if parents and the public were not part of the effort to set standards and develop assessments. If standards and assessment are a necessary condition of higher levels of student learning, then public engagement in setting standards and developing assessments is a necessary condition as well.

From Standards to Achievement: Accountability Is Key

Meeting these challenges will not be easy, but as demonstrated, they can be solved. Districts can implement effective standards-and-assessment systems. The real test is ensuring that students meet the standards. Can districts pass that test?

As this paper has argued, standards-and-assessment systems can contribute significantly to the goal of helping all students achieve at higher levels. They can provide models of high-quality work and opportunities for students to demonstrate their knowledge and skills. But districts will know whether students are consistently producing high-quality work only by regularly monitoring student performance.

The key is accountability. By holding students, schools, and themselves accountable for student performance, districts will keep track of performance and determine what they need to do to improve it. Their plans focus on performance; rather than coming up with lists of activities that may or may not produce results, they analyze their current level of performance, set targets for improvement, develop strategies to achieve the targets, and implement those plans. They then continually monitor results to determine where they need to make adjustments.

"Districts can implement effective standards-and-assessment systems. The real test is ensuring that students meet the standards."

In that way, standards become the centerpiece of the entire school system. And with meaningful standards firmly in place, districts can move toward the goal of ensuring that all students reach high levels of performance. ◆

REDESIGNING CLASSROOMS TO USE STANDARDS
Five Examples from New American Schools

Here are examples of how five NAS designs provide schools with the resources and professional development to restructure to standards-driven teaching and learning.

• **ATLAS Communities** includes in its professional development program efforts to help teachers engage in fruitful conversations around standards for student work. Significantly, these conversations take place across "pathways" that link elementary, middle, and high schools, so that teachers at all grade levels begin to develop a common understanding of standards of performance.

All of these discussions use student work as data to build understanding. For example, teachers might examine a piece of writing to determine whether it represents high-quality exposition for an eighth grader. Or they may look at a mathematics problem to see if the reasoning and conceptual understanding in the answer reflect the expectations for students at that particular level.

• **Co-NECT Schools** provides a tool called Project Builder that enables teachers to correlate their classroom projects with standards. Part of its on-line Co-NECT Exchange, Project Builder enables teachers to learn in real time how to create a standards-based project. It also includes exemplars of effective projects.

In its face-to-face professional development, Co-NECT also focuses on helping teachers understand standards and assessment. Throughout the year, the Design Team holds four intradistrict sessions; one focuses solely on standards and another focuses on assessment. All four emphasize the notion of integrating standards into classroom activities in a seamless way.

Co-NECT's assessments also assist in this effort by providing opportunities to help teachers develop a better understanding of standards. The Design Team's partner—the Center for the Study of Testing, Evaluation, and Educational Policy at Boston College—has developed item banks drawn from the National Assessment of Educational Progress, the Urban District Assessment Consortium, the International Assessment of Educational Progress, and other tests. Districts that choose this optional service—it's in use in Memphis and Dade County, FL—bring together teachers and district officials to select items that fit with local standards, thereby developing a sense of the standards. The teachers are also trained in scoring the open-ended sections of the test and thus acquire an understanding of high-quality work.

• **Expeditionary Learning Outward Bound** provides a great deal of professional development around the expectations, or standards, for student learning and on how to build good learning expeditions that enable students to reach those goals. A key emphasis is on modeling—providing examples of high-quality work to guide students in their learning as well as teachers in their learning of pedagogy.

The Expeditionary Learning Outward Bound internal professional development program also

helps school designers, who assist four sites each, learn to guide school faculties in examining student work against standards.

• **Modern Red Schoolhouse Institute** has produced a well-regarded set of standards that participating schools use, and it is piloting assessments that measure progress toward those standards. A major component of the Design Team's professional development program is aimed at ensuring that all teachers become intimately familiar with the standards and implement them in the classroom. This is accomplished through the use of "Foundation Units"—instructional units that link curriculum, instruction, and assessment to standards.

In addition to professional development that focuses directly on standards and assessments, Modern Red Schoolhouse Institute assists schools in analyzing their current program against the Design Team's standards. Through a curriculum inventory and a survey of performance data, the Design Team helps teachers examine curriculum content, materials, lesson plans, and student work to evaluate whether they are providing opportunities for students to reach the standards—and what they need to adjust to strengthen their instructional program. Through this analysis, teachers develop a clear sense of the standards and their curricular implications, and a coherent plan for making the modifications needed for all students to reach the standards. During the school year and over the summer, the Design Team holds a series of intensive curriculum workshops to help teachers acquire the knowledge and skills to implement their plans and develop and refine a standards-driven curriculum.

• **The National Alliance for Restructuring Education** conducts a set of workshops specifically aimed at implementing standards-driven education. One workshop, entitled "Using Standards: An Introduction," provides teachers with opportunities to study the performance standards set by New Standards, a National Alliance partner, in depth and to consider their implications for curriculum and instruction. As part of the workshop, teachers evaluate several pieces of student work and decide how to organize a program that will enable their own students to produce similar work.

A second, three-day workshop, "Standards-Driven Curriculum: Course 1," takes teachers through the process of developing standards-driven instructional units. These units result in extended pieces of student work that demonstrate achievement of standards. With these units, teachers use standards in the classroom by asking students to complete rigorous, complex pieces of work and evaluate that work against high standards of performance. Teachers who have gone through this workshop and implemented units say the process has helped improve learning by ensuring that student work is tied to standards.

The National Alliance is also developing workshops on instruction around the content areas of English language arts, mathematics, and science. And it conducts workshops on performance assessment for teachers, and on using results from New Standards reference examinations.

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New American Schools Designs

As of Fall 1997, New American Schools (NAS) is at work in over 700 schools around the country. NAS district partners commit to transforming a minimum of 30 percent of their schools within five years. Most partners are on track to meet and exceed this goal by year three. NAS schools reflect one of the eight designs below.

ATLAS Communities

The ATLAS design centers on pathways—groups of schools made up of high schools and the elementary and middle schools that feed into them. Teams of teachers from each pathway work together to design curriculum and assessments based on locally defined standards. The teachers in each pathway collaborate with parents and administrators to set and maintain sound management and academic policies, ultimately resulting in improved student performance.
For more information: (617) 969-7100;
e-mail: Atlas@edc.org; www.edc.org/FSC/ATLAS

Audrey Cohen College: Purpose-Centered Education

The Audrey Cohen College system of education focuses student learning on the study and achievement of meaningful "purposes" for each semester's academic goals. Students achieve their purpose by using their knowledge and skills to plan, carry out, and evaluate a constructive action to benefit the community and the larger world. Leadership is emphasized and students are expected to meet high academic standards.
For more information: (212) 343-1234;
e-mail: JanithJ@aol.com; www.audrey-cohen.edu

Co-NECT Schools

Assisting schools in creating and managing their own high-tech equipment and network, Co-NECT uses technology to enhance every aspect of teaching, learning, professional development, and school management. Co-NECT schools are organized around small clusters of students who are taught by a cross-disciplinary team. Most students stay in the same cluster for at least two years. Teaching and learning revolve around interdisciplinary projects that promote critical skills and academic understanding, as well as integrating technology.
For more information: (617) 873-2683;
e-mail: info@conect.bbn.com; http://co-nect.bbn.com

Expeditionary Learning Outward Bound

Built on 10 design principles, Expeditionary Learning Outward Bound (ELOB) operates on the belief that learning is an expedition into the unknown. ELOB draws on the power of purposeful, intellectual investigations—called learning expeditions—to improve student achievement and build character. Learning expeditions are long-term, academically rigorous, interdisciplinary studies that require students to work inside and outside the classroom. In ELOB schools, students and teachers stay together for more than one year, teachers work collaboratively, and tracking is eliminated.
For more information: (617) 576-1260;
e-mail: info@elob.ednet; http://hugse1.harvard.edu/~elob

Los Angeles Learning Centers

The Los Angeles Learning Centers (LALC) design is a comprehensive K–12 model for urban schools. The curriculum and instruction are designed to ensure that all students are taught in a K–12 community, enabling new strategies to overcome barriers by addressing the health and well-being of students and their families. Governance and management are also restructured to engage communi ty members in decision making and to ensure that the design can improve and evolve. LALC also incorporates the extensive use of advanced technology as an essential element for implementation of the design.
For more information: (213) 622-5237;
e-mail: gpruitt@laedu.lalc.k12.ca.us; www.lalc.k12.ca.us

Modern Red Schoolhouse Institute

This design strives to help all students achieve high standards through the construction of a standards-driven curriculum; use of traditional and performance-based assessments; establishment of effective organizational patterns and professional-development programs; and implementation of effective community-involvement strategies. Students master a rigorous curriculum, develop character, and promote the principles of democratic government. These elements of the traditional red schoolhouse are combined with a high level of flexibility in organizing instruction and deploying resources; use of innovative teaching methodologies; student groupings for continuous progress; and advanced technology as a learnin and instructional management tool.
For more information: (888) 275-6774;
e-mail: skilgore@mrsh.org; www.mrsh.org

National Alliance for Restructuring Education

This partnership of schools, districts, states, and leading national organizations works to change the education system from classroom to statehouse through a five-point set of priorities. Known as "design tasks," they are: standards and assessments, learning environments, high-performance management, community services and supports, and public engagement. The National Alliance seeks to enable all graduating high school student to attain the Certificate of Initial Mastery, a credential representing a high standard of academic accomplishment
For more information: (202) 783-3668;
e-mail: nareinfo@ncee.org;
www.ncee.org/OurPrograms/narePage.html

Roots and Wings

This elementary school design builds on the widely used Success for All reading program and incorporates science, history, and mathematics to achieve a comprehensive academic program. The premise of the design is that schools must do whatever it takes to make sure all student succeed. To this end, Roots and Wings schools provide at-risk students with tutors, family support, and a variety of other services. While the "roots" of the design refer to mastery of basics, the "wings" represent advanced accomplishments that students achieve through interdisciplinary projects and a challenging curriculum provided by the design.
For more information: (410) 516-0274;
e-mail: rslavin@inet.ed.gov; http://scov.csos.jhu.edu/sfa

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Education Commission of the States

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Getting Better by Design